

# 10/19/05 DRAFT - Virginia Department of Health Public Health Emergency Response Plan for Zoonotic Diseases Using Monkeypox as a Prototype

## I. Situation and assumptions

- A. Background:** Monkeypox is a rare viral zoonotic disease that occurs primarily in rain forest countries of central and west Africa. Monkeypox virus was first isolated from monkeys in 1958 but has been identified in many other species including rodents and lagomorphs. Human monkeypox was first identified in 1970 in the Democratic Republic of the Congo. In 2003, the first reported outbreak of monkeypox occurred in the United States. Most people with confirmed monkeypox reported exposure to native prairie dogs that had contact with imported African rodents. Several rodent species from a shipment of animals from Ghana to Texas had laboratory-confirmation of infection with monkeypox virus and are the likely source of its introduction into the United States. Gambian giant rats from this shipment were housed in close proximity to prairie dogs at a U.S. animal vendor implicated in the sale of infected prairie dogs. In the course of this outbreak, approximately 70 cases of human monkeypox were reported to the Centers for Disease Control and Prevention (CDC). No further human cases of monkeypox have been reported in the United States.

In June 2003, the CDC and the Food and Drug Administration (FDA) issued a legal order to stop the import of all rodents from Africa into the United States. This order also stops the movement, sale, or release into the wild of prairie dogs (*Cynomys sp.*) and six types of African rodents (i.e., tree squirrels [*Heliosciurus sp.*], rope squirrels [*Funisciurus sp.*], dormice [*Graphiurus sp.*], Gambian giant pouched rats [*Cricetomys sp.*], brush-tailed porcupines [*Atherurus sp.*], and striped mice [*Hybomys sp.*] within the United States. In November 2003, the order was replaced by an interim final rule which continues to enforce the order. The interim final rule can be found online at <http://edocket.access.gpo.gov/2003/03-27557.htm> or through the CDC monkeypox website: <http://www.cdc.gov/ncidod/monkeypox/index.htm>.

Other types of animals that may become infected with monkeypox and potentially transmit disease to humans are currently unknown. Until more information is available, it must be assumed that any mammal, including wild animals, common household pets (e.g., dogs, cats), and pocket pets (e.g., hamsters or gerbils) could acquire monkeypox if exposed to another animal that is infected. An emergency response plan must be in place for the possibility that monkeypox could occur again in the United States.

- B. Clinical features in humans:** Clinically, monkeypox disease is similar to smallpox, although monkeypox is often milder and less transmissible from person

to person. Clinical features of monkeypox include fever, headache, backache, lymphadenopathy (not commonly seen in smallpox), sore throat, and cough. One to three days after fever onset, a papular rash develops which is often first seen on the face, but may present on other parts of the body. The rash lesions usually develop through several stages before crusting and falling off. Illness typically lasts for 2 to 4 weeks. Case-fatality rates among people with monkeypox in central and west Africa, where people live in remote areas, are medically underserved and are likely not vaccinated against smallpox, range from 1%-10%. During the 2003 outbreak in the United States there were no reported deaths due to monkeypox.

- C. Infectious agent:** Monkeypox is an orthopoxvirus and is genetically distinct from variola virus (the virus that causes smallpox) and vaccinia virus (the virus used in the vaccine against smallpox).
- D. Animal reservoir:** Studies suggest that several species of squirrels in the Democratic Republic of Congo are a likely reservoir of monkeypox virus and that humans are sporadically infected.
- E. Mode of transmission:** Monkeypox is usually transmitted to humans from the bite of an infected animal or from direct contact with lesions or body fluids from an infected animal. Less frequently, monkeypox can be transmitted from person-to-person by respiratory droplets during prolonged face-to-face contact. In addition, monkeypox could spread by direct contact with body fluids of an infected person or with virus-contaminated objects, such as bedding or clothing. It should be noted that during the recent monkeypox outbreak in the United States, no cases of monkeypox were attributed exclusively to person-to-person transmission.
- F. Incubation period:** The incubation period for monkeypox in humans ranges from 7 to 14 days with an average of 12 days. In animals the incubation period for monkeypox is not yet definitively determined. It is possible that incubation periods may vary according to the animal species involved. In the 2003 U.S. monkeypox outbreak, the incubation period in prairie dogs appeared to be similar to that in humans.
- G. Clinical features in animals:** In the 2003 outbreak of monkeypox in the United States, clinical features in animals included fever, cough, discharge from the eyes (appeared cloudy or crusted), and enlarged lymph nodes, followed by a bumpy or blister-like rash. Animals may appear tired and may not eat or drink. Some animals may have only minimal signs of illness.
- H. Period of communicability:** It is likely a person infected with monkeypox virus is communicable during periods similar to those for smallpox, meaning from the time of development of the earliest lesions to the disappearance of all scabs (about 3 weeks). The patient is most contagious during the period before the rash

erupts by aerosol droplets from oropharyngeal lesions. It is likely infected animals are most contagious during the animal's similar clinical stages, although as noted above, some animals may have minimal symptoms of illness. It is also possible that humans and animals could shed monkeypox virus for a prolonged time which could extend the period of communicability significantly.

## **II. Surveillance and investigation for monkeypox in humans**

Notification of a suspected case of monkeypox in humans may come to a local health department (LHD), district health department (DHD), or the central office of the Virginia Department of Health (VDH) from a number of sources including a patient, private medical doctor, hospital, or the CDC. Reports of a suspect case of monkeypox in an animal may come from a veterinarian, a pet owner, the Virginia Department of Game and Inland Fisheries (VDGIF), or the Virginia Department of Agriculture and Consumer Services (VDACS) and should urgently raise concern for potential human cases of monkeypox as a result of transmission from the animal population.

**A. Initial assessment for human cases:** After receiving an inquiry about a potential case of monkeypox, DHD personnel, with the assistance of the Division of Surveillance and Investigation (DSI) and the Division of Zoonotic and Environmental Epidemiology (DZEE) within the VDH, will assess whether the patient meets one of the case classifications for monkeypox outlined below.

### **1. Clinical criteria**

- Rash: (macular, papular, vesicular, or pustular; generalized or localized; discrete or confluent)
- Fever: (subjective or measured temperature of greater than or equal to 99.3 degrees F [37.4 degrees C])
- Other signs and symptoms: chills and/or sweats, headache, backache, lymphadenopathy, sore throat, cough, shortness of breath

### **2. Epidemiologic criteria**

- Exposure to an exotic or wild mammalian animal or to any mammalian animal housed with exotic or wild mammalian animal that originates from a geographic area where the occurrence of monkeypox is biologically plausible (e.g., Africa, locations in the U.S. where monkeypox was confirmed during the 2003 outbreak). The pet or animal constituting the exposure must have clinical signs of illness consistent with monkeypox (e.g., conjunctivitis, respiratory symptoms, and/or rash).

- Exposure to an exotic or wild mammalian animal with or without clinical signs of illness that has been in contact with either a mammalian animal infected with monkeypox or a human infected with monkeypox
- Exposure to a suspect, probable, or confirmed human case of monkeypox

### 3. Laboratory criteria

- Isolation of monkeypox virus in culture
- Demonstration of monkeypox virus DNA by polymerase chain reaction testing of a clinical specimen
- Demonstration of virus morphologically consistent with an orthopoxvirus by electron microscopy in the absence of exposure to another orthopoxvirus
- Demonstration of presence of orthopoxvirus in tissue using immunohistochemical testing methods in the absence of exposure to another orthopoxvirus

### 4. Case classification

- ***Suspect case:*** meets one of the epidemiologic criteria AND has fever or unexplained rash AND two or more other signs or symptoms with onset of first sign or symptom less than or equal to 21 days after last exposure meeting epidemiologic criteria
- ***Probable case:*** meets one of the epidemiologic criteria AND has fever AND vesicular-pustular rash with onset of first sign or symptom less than or equal to 21 days after last exposure meeting epidemiologic criteria
- ***Confirmed case:*** meets one of the laboratory criteria

### 5. Exclusion criteria:

A case may be excluded as a suspect or probable monkeypox case if:

- An alternative diagnosis can fully explain the illness OR

- The case was reported on the basis of primary or secondary exposure to an exotic or wild mammalian pet or a human (see epidemiologic criteria) subsequently determined not to have monkeypox, provided other possible epidemiologic exposure criteria are not present OR
- A case without a rash does not develop a rash within 10 days of onset of clinical symptoms consistent with monkeypox
- The case is determined to be negative for non-variola generic orthopoxvirus by polymerase chain reaction testing of a well-sampled rash lesion by the approved Laboratory Response Network (LRN) protocol.

**B. Response actions for District Health Departments (DHD) for suspected human monkeypox cases**

1. Ensure that human and/or animal medical care facilities with a suspected case of monkeypox on the premises implement monkeypox infection control measures immediately. Refer to section **IV. Infection Control**. Confirm that diagnostic testing is being conducted. Refer to section **III. Management of Suspected Cases** and **IX. Role of Public Health Laboratory**.
2. Advise the medical facility to obtain specimens as directed by Virginia's state public health laboratory, the Division of Consolidated Laboratory Services (DCLS). Ensure proper forms accompany the specimens. Follow up with the medical facility and DCLS to ensure specimens have been sent and received. Refer to section **IX. Role of Public Health Laboratory**.
3. Obtain detailed information about the patient's exposure history (e.g., exposure to wild or exotic mammalian animal or to any mammalian animal housed with exotic or wild mammalian animal that originates from a geographic area where exposure to monkeypox is biologically plausible) and medical history (e.g., onset of symptoms).
4. Identify household and close contacts of the patient.
5. Provide information (i.e., fact sheet about monkeypox) to the suspect case and his/her contacts about the disease and the risk of transmission.
6. If human quarantine or isolation measures are recommended or invoked by the State Commissioner of Health, ensure that patients for whom isolation is recommended understand such recommendations and agree to follow them to the extent possible. Monitor patients for compliance daily.
7. Inform patients that any animals in the household must remain confined there until further notice from VDH. A veterinarian from VDACS or another agency will obtain specimens from sick animals for laboratory testing. Specimens should be obtained at the site where the animal resides or at another facility approved by VDH. (Refer to sections **VII.**

**Management of animals exposed to monkeypox and VII. Animal infection control.)**

**C. Response actions for the Division of Surveillance and Investigation and the Division of Zoonotic and Environmental Epidemiology for a suspected human monkeypox case**

1. Provide consultation and technical assistance to the DHD needed on issues such as case classification, specimen collection, infection control, home isolation, etc.
2. Contact the State Veterinarian in VDACS and the Director of the Wildlife Division in VDGIF to inform them about the suspected case of monkeypox so they may initiate an investigation of animals that could potentially be involved in the transmission of monkeypox to humans, and so they may develop appropriate disease control measures and surveillance tools for potential animal disease.
3. Arrange to have a veterinarian work with the DHD on issues related to monkeypox and animal disease surveillance, investigation, and control.
4. Notify the CDC about the case and consult with them for guidance about infection control measures, including smallpox vaccination if indicated.
5. Create and maintain a log of the cases which can be accessed by staff in both divisions.
6. Consult with DCLS about specimen collection and submission.
7. Confirm that DHD personnel are aware of forms that need to be completed and where to find them on the Internet.
8. Confirm that infection control practices are being instituted and followed.
9. Inform the designated person in Animal Health (see appendix) at the Virginia Department of Agriculture and Consumer Services, Division of Animal and Food Industry Services (VDACS/DAFIS) about the suspected case of monkeypox so VDACS/DAFIS staff may initiate their investigation of any implicated animal and develop appropriate disease control measures and surveillance for animal disease. If the suspect case cannot identify any obvious animal exposure, VDACS/DAFIS should still be contacted and requested to initiate appropriate surveillance.
10. Contact the designated person in the Wildlife Division or the Non-Game Division (see appendix) in VDGIF to inform him/her about the suspected case of monkeypox so they may increase surveillance for potential monkeypox disease in wild animals.
11. Coordinate special investigations (e.g., of household contacts, of animal exposures) as needed and/or as requested by CDC. Assist with resource procurement if needed.
12. Make arrangements for obtaining and distributing smallpox vaccine if indicated.
13. Advise DHD about who should be vaccinated with smallpox vaccine (see section **IV. F. Use of smallpox vaccine during an outbreak of monkeypox**).

14. Inform and coordinate with the following organizations and agencies that could also potentially become involved in the investigation, surveillance, and disease control measures of animals implicated or suspected as the source of human monkeypox.

- Local animal control agencies (may delegate to LHD)
- Virginia Animal Control Association
- Virginia Federation of Humane Societies
- Virginia Wildlife Rehabilitators Association
- Virginia Veterinary Medical Association
- Virginia Association of Licensed Veterinary Technicians
- Virginia-Maryland Regional College of Veterinary Medicine
- Blue Ridge Community College (veterinary technician program)
- Northern Virginia Community College (veterinary technician program)
- Virginia Wildlife Center
- United States Department of Agriculture (USDA)
- Food and Drug Administration (FDA)

### **III. Management of suspected human monkeypox cases**

People with fever and vesiculopustular rash seeking medical care should be asked about possible exposure to wild or exotic mammals (e.g., rodents imported from Africa, prairie dogs, or other mammals from areas in the U.S. where the occurrence of monkeypox is biologically plausible) or to persons with monkeypox. Because patients with monkeypox may present with symptoms suggestive of smallpox, they should be assessed by a healthcare worker for risk of smallpox using the Centers for Disease Control and Prevention algorithm based upon clinical symptoms (see CDC website <http://www.bt.cdc.gov/agent/smallpox/diagnosis>).

Rash illnesses suspected to be monkeypox should be confirmed by laboratory evaluation which, in addition to determining the presence of monkeypox virus, should have the capability to detect varicella, vaccinia, and other relevant viruses (Refer to section **II. A. 3. Laboratory Criteria**). Laboratory confirmation of monkeypox cases is particularly important before recommending vaccination to persons with close or intimate contact with a monkeypox case and considered to have contraindications to smallpox vaccination (Refer to section **IV. F. Use of smallpox vaccine during an outbreak of monkeypox**). In addition to monkeypox, the differential diagnosis should include chickenpox, vaccinia in a person recently vaccinated against smallpox, and even the unlikely possibility of smallpox.

No data are available on the effectiveness of vaccinia immune globulin (VIG) in treatment of a person with severe monkeypox infections. However, VIG may be considered for prophylactic use in an exposed person with severe immunodeficiency in

T-cell function for whom smallpox vaccination following exposure to monkeypox is contraindicated. VIG has no proven benefit in the treatment of smallpox complications.

No data are available on the effectiveness of cidofovir in treatment of human monkeypox cases. However, cidofovir has proven anti-monkeypox viral activity in *in vitro* studies. It is unknown whether a person with severe monkeypox infection will benefit from treatment with cidofovir, however, its use may be considered in such instances. Cidofovir has significant toxicity and should only be considered for treatment of severe monkeypox infections, not for use as prophylaxis.

Clinical consultation about the use of VIG and cidofovir is available from VDH staff. In addition, clinical consultation is available 24 hours a day, 7 days a week at the CDC at (770) 488-7100.

#### **IV. Infection control - human**

##### **A. General Precautions - human**

If a patient with suspected monkeypox infection is seen as an outpatient or admitted to the hospital, infection control personnel should be notified immediately. A combination of **Standard, Contact, and Droplet Precautions** should be applied in all healthcare settings. In addition, because of the theoretical risk of airborne transmission, **Airborne Precautions** should be applied whenever possible. Precautions include:

1. Hand hygiene after all contact with an infected patient and/or the environment of care.
2. Use of gown and gloves for patient contact.
3. Protection from virus spread through droplets or aerosols. Use of a NIOSH-certified N95 (or comparable) filtering disposal respirator that has been fit-tested for the healthcare worker is preferred, especially for extended contact in the inpatient setting. If N95 or comparable respirators are not available for healthcare workers, then surgical masks should be worn to protect against transmission through contact or large droplets. The respirator or mask should be applied before entering the patient's room.
4. Eye protection (e.g., face shield or goggles) if splash or spray of body fluids is likely, as recommended for Standard Precautions.
5. Containing and disposing of contaminated waste (e.g., dressings) in accordance with facility-specific guidelines for infectious waste.
6. Care when handling soiled laundry (e.g., bedding, towels, personal clothing) to avoid contact with lesion exudates. Soiled laundry should not be shaken or otherwise handled in a manner that may aerosolize infectious particles.
7. Handling used patient care equipment in a manner that prevents contamination of skin and clothing. Ensuring that used equipment has been cleaned and reprocessed appropriately.



8. Ensuring procedures are in place for cleaning and disinfecting environmental surfaces in the patient care environment. Using any EPA-registered hospital detergent/disinfectant currently used by healthcare facilities for environmental sanitation. Following manufacturer's recommendations for specific concentrations, contact time, and care in handling.

## **B. Patient placement - human**

Outpatient settings: Patients who present to an emergency room or outpatient clinical setting with fever and vesiculopustular rash should be placed in a private examination room as soon as possible. Use a negative pressure room, if available. Before precautions can be implemented, or in areas in which personal protective equipment or separation from others is not feasible (e.g., residential setting in which healthcare may be provided), place a surgical mask over the patient's nose and mouth (if tolerated) and cover exposed skin lesions with a sheet or gown.

Inpatient settings: Patients who require hospitalization should be placed in a negative pressure isolation room on Standard, Contact, Droplet, and Airborne Precautions. If a negative pressure room is not available, a private room should be used.

## Monitoring of healthcare personnel exposed to monkeypox:

1. Healthcare workers who have unprotected exposures (i.e., were not wearing all necessary PPE) to patients with monkeypox need not be excluded from work, but should undergo active surveillance for symptoms, including measurement of body temperature at least twice daily for 21 days following the exposure. Prior to reporting for work each day, the healthcare worker should be questioned about fever and evidence of rash.
2. Healthcare workers who have cared for or otherwise been in contact with monkeypox patients while adhering to all recommended infection control precautions do not need to undergo active monitoring. However, healthcare workers should be aware of signs or symptoms that could suggest monkeypox and seek medical attention immediately if they develop such signs or symptoms.

## **C. Home management, isolation and quarantine - human**

Under certain circumstances, the State Commissioner of Health may invoke control measures that include quarantine and isolation of humans and/or certain animals as described in Article 3.02 of Title 32.1 of the Code of Virginia regarding *Quarantine and Isolation of Persons with Communicable Diseases of Public Health Threat*. The State Commissioner of Health, the State Epidemiologist, and the State Public Health Veterinarian will collaborate to determine the need for quarantine and isolation measures for humans suspected of having monkeypox.

Monkeypox patients who do not require hospitalization for medical indications may be isolated at home. The ability to implement isolation and infection control measures in the home is likely to vary based on whether the patient is a child or adult, whether multiple people in the home are infected, the number of people residing in the home, and the nature and extent of lesions on each patient. The following principles are recommended in the home setting.

1. People with monkeypox should not leave the home except as required for follow-up medical care. They also should avoid going outdoors if contact with wild or domestic mammals is possible. Unexposed people who do not have an essential need to be in the home should not visit. Household members who are not ill should limit contact with the person with monkeypox. People with extensive lesions that cannot be easily covered (excluding facial lesions) or draining/weeping lesions or respiratory symptoms (e.g., cough, sore throat, or rhinorrhea) should be isolated in a room or areas separate from other family members when possible.
2. People with monkeypox should wear a surgical mask, especially those who have respiratory symptoms (e.g., cough, shortness of breath, sore throat). If this is not feasible (e.g., a child with monkeypox), other household members should consider wearing a surgical mask when in the presence of the person with monkeypox.
3. Skin lesions should be covered to the extent possible (e.g., long sleeves, long pants) to minimize risk of contact with others.
4. Disposable gloves should be worn for direct contact with weeping lesions and disposed after use.
5. Hand hygiene (i.e., hand washing with soap and water or use of an alcohol-based hand rub) should be performed by infected people and household contacts after touching body sites, clothing, linens, or environmental surfaces that may have had contact with infectious lesions.
6. Laundry (e.g., bedding, towels, clothing) may be washed in a standard washing machine with warm water and detergent; bleach may be added but is not necessary. Disposable gloves should be used when handling soiled laundry to avoid direct contact with contaminated material. Gloves should be disposed of after use. Soiled laundry should not be shaken or otherwise handled in a manner that may aerosolize infectious particles.
7. Dishes and other eating utensils should not be shared. Segregation of specific utensils for use by the infected person is not necessary. Soiled dishes and eating utensils should be washed in a dishwasher or by hand with warm water and soap.
8. Contaminated surfaces should be cleaned and disinfected. Standard household cleaning/disinfectants may be used in accordance with manufacturer's instructions.
9. Dressings, bandages, and other materials contaminated with lesion drainage should be bagged and placed in another container for disposal with other household waste.

#### **D. Duration of isolation - human**

1. Decisions regarding discontinuation of isolation should be made in accordance with any quarantine and isolation control measures invoked by the State Commissioner of Health and only after consultation with the State Epidemiologist and staff in DSI or DZEE at VDH.
2. For individuals with vesiculopustular rash, isolation, in either a healthcare facility or home setting, should be continued until all lesions have crusted and separated from the skin.
3. For individuals who develop symptoms (i.e., fever, sore throat, cough) without rash, isolation should be continued for 7 days after fever onset. If rash does not develop during this time, isolation may be discontinued. Affected individuals should continue symptom surveillance for an additional 14 days. If symptoms return or if rash develops, the DHD should be notified immediately and will, in turn, notify staff in DSI or DZEE at VDH.
4. Patients with monkeypox or those under symptom surveillance should not donate blood, cells, tissue, organs, breast milk, or semen.

#### **E. Management of human asymptomatic contacts**

1. Asymptomatic contacts to animals or humans suspected to have monkeypox should be placed under symptom surveillance for 21 days after their last exposure. Symptoms of concern include fever (temperature greater than or equal to 99.3 degrees F), sore throat, cough, or skin rash. Temperature should be taken twice daily.
2. If symptoms develop, designated staff at the DHD should be notified immediately.
3. Asymptomatic contacts should not donate blood, cells, tissue, organs, breast milk, or semen while they are under symptom surveillance.
4. Asymptomatic contacts should continue routine daily activities (e.g., going to work, school) but should remain close to home for the duration of surveillance.

#### **F. Use of smallpox vaccine for humans during a monkeypox outbreak**

Limited information is available on the efficacy of smallpox vaccine for prevention of monkeypox. Data suggest that pre-exposure vaccination is highly effective (greater than or equal to 85%) in protecting those exposed to monkeypox from developing disease. Less information is available on the efficacy of post-exposure vaccination. Because post-exposure smallpox vaccination is effective in preventing or ameliorating smallpox disease, it is likely that post-monkeypox exposure smallpox vaccination should have a similar impact against monkeypox disease. The following lists those who should be vaccinated with smallpox vaccine in the setting of a

monkeypox outbreak. Note: irrespective of vaccination status, all people listed below should follow recommended infection control precautions.

1. Investigators. Ideally, investigators of suspected human and animal monkeypox cases should have received smallpox vaccination within the past 1-3 years. When possible, priority should be given to using investigators who had a confirmed take to previous smallpox vaccination. Ideally, the vaccination site should be crusted over before deployment. However, if this is not feasible, these individuals may be vaccinated immediately before deploying for the field investigation and should follow vaccine site precautions (Refer to ***CDC Recommendations for using smallpox vaccine in the pre-event vaccination program: Supplemental Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Healthcare Infection Control Practices Advisory Committee (HICPAC). MMWR 2003; 52 (RR07); 1-16.***). Unvaccinated investigators currently involved in field investigations or who have been recently involved in such work, should be vaccinated as soon as possible, preferably within 4 days from initial exposure.
2. Healthcare workers. When possible, healthcare workers who were previously vaccinated against smallpox and had confirmed takes should care for patients with suspected or confirmed monkeypox. Healthcare workers who know in advance that they will be caring for patients with suspected or confirmed monkeypox should be vaccinated immediately prior to beginning their clinical duties. Unvaccinated healthcare workers already caring for confirmed monkeypox cases or recently involved in such care should be vaccinated. Vaccination should occur as soon as possible after exposure. Vaccination is recommended for persons who are within 4 days of initial direct (intimate or close) exposure and should be considered only for persons who are within 2 weeks of most recent exposure. Vaccine recipients should follow vaccine site precautions.
3. Close contacts. Close contact, defined as household contacts as well as others who have had close or intimate contact with confirmed human cases and who are within 4 days of initial direct exposure to a monkeypox case, should be vaccinated. Vaccination should be considered for persons who are within 2 weeks of most recent exposure. VDH staff should be consulted regarding decisions about vaccination of contacts. Vaccine recipients should follow vaccine site precautions.
4. People having contact with ill prairie dogs or other ill small mammals (including veterinarians and other animal medical personnel, animal welfare personnel, animal control personnel). Smallpox vaccination is recommended for persons who have, within the past 4 days, had direct physical (intimate) contact with ill prairie dogs meeting the probable or confirmed case definition for animals. Vaccination should be considered for persons who are within 2 weeks of most recent exposure. In addition, vaccination should be considered for people who

have close contact with an ill animal that meets the probable or confirmed animal case definitions for monkeypox.

5. Smallpox vaccination is not recommended for people exposed to only healthy animals.
6. Laboratory workers. Laboratory workers at designated reference laboratories who handle specimens from ill prairie dogs or other ill small mammals meeting the probable or confirmed case definitions for monkeypox should be vaccinated as recommended for field investigators or healthcare workers anticipated to have future contact with suspected monkeypox cases.
7. Assessment of contraindications to smallpox vaccination. The type of exposure should be assessed carefully for healthcare workers, household or intimate contacts who were exposed within the past 2 weeks to a probable or confirmed animal case or confirmed human case of monkeypox, but who have contraindications to smallpox vaccine receipt in the pre-event smallpox setting (*CDC. Smallpox vaccination and adverse reactions: Guide for clinicians. MMWR 2003; 52; (RR-4); 1-28 and CDC. Notice to readers: supplemental recommendations on adverse events following smallpox vaccine in the pre-event vaccination program: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2003;52:282-284*). VDH will consult with CDC to make this assessment. The risk of monkeypox disease for people with a close or intimate exposure to confirmed monkeypox cases is believed to be greater than the risk of adverse events resulting from vaccinia exposure for most people for whom smallpox vaccination would be otherwise contraindicated in the pre-event smallpox vaccination setting. In the post-exposure setting, most contraindications are considered precautions to vaccination. In people with close or intimate exposure within the past 2 weeks to a confirmed human case or probable or confirmed animal case of monkeypox, neither age, pregnancy, nor a history of eczema are contraindications to receipt of smallpox vaccination. These conditions are precautions and not contraindications and the decision about whether or not to vaccinate should be made in consultation with VDH.
8. Contraindications to smallpox vaccine.

The following people have a risk of severe complications from smallpox vaccination that may approach or exceed the risk of disease from monkeypox exposure. Consultation with VDH should be sought to discuss vaccination of such people in the post-exposure setting.

- a. People with severe immunodeficiency in T-cell function, defined as:
  - HIV-infected adults with CD4 lymphocyte counts less than 200 (or age-appropriate equivalent counts for HIV-infected children) or,

- Solid organ, bone marrow transplant recipients or others currently receiving high dose immunosuppressive therapy (i.e., 2 mg/kg body weight or a total of 20 mg/day of prednisone or equivalent for people whose weight is > 10 kg, when administered for > 2 weeks) or,
- People with lymphosarcoma, hematological malignancies, or primary T-cell congenital immunodeficiencies.

b. People with life-threatening allergies to latex or to smallpox vaccine or any of its components (polymyxin B, streptomycin, chlortetracycline, neomycin).

## **V. Surveillance and investigation for monkeypox in animals**

**A. Initial assessment for animal cases:** A suspected case of monkeypox in an animal should be reported immediately to the Virginia State Public Health Veterinarian who will inform the Virginia State Veterinarian. The State Public Health Veterinarian is the initial point of contact for any impending or existing human health emergency related to animals. In addition, the appropriate DHD should be contacted immediately to initiate heightened surveillance for possible human cases of monkeypox. VDH, VDACS, and VDGIF will work together to assess whether the animal(s) in question meets one of the case classifications for monkeypox as outlined below.

### **1. Clinical criteria**

- Rash (macular, papular, vesicular, or pustular; generalized or localized; discrete or confluent)
- Other possible signs and symptoms: conjunctivitis, coryza, cough, anorexia, lethargy

### **2. Epidemiological criteria**

- Originates from a shipment of mammals from Africa.
- Originates from an area in the U.S. where monkeypox was confirmed during the 2003 monkeypox outbreak.
- Originates from a holding facility where wild or exotic mammalian animals with suspect, probable, or confirmed monkeypox have been reported.
- Exposure to a wild or exotic mammalian animal that has been diagnosed with suspect, probable, or confirmed monkeypox.

- Exposure to a suspect, probable, or confirmed human case of monkeypox.

### 3. Laboratory criteria

- Isolation of monkeypox virus in culture.
- Demonstration of virus morphologically consistent with an orthopoxvirus by electron microscopy in the absence of exposure to another orthopoxvirus.
- Demonstration of monkeypox virus DNA by polymerase chain reaction testing in a clinical specimen.
- Demonstration of presence of orthopoxvirus in tissue using immunohistochemical testing methods in the absence of exposure to another orthopoxvirus.

### 4. Case classification

- ***Suspect case:*** meets one of the epidemiologic criteria AND has rash OR two or more other signs or symptoms
- ***Probable case:*** meets one of the epidemiologic criteria AND has rash AND two or more other signs or symptoms
- ***Confirmed case:*** meets one of the epidemiologic criteria AND has rash AND two or more other signs or symptoms AND meets one of the laboratory criteria

## B. Response actions for the State Public Health Veterinarian for a suspected monkeypox case in an animal

1. Contact the State Veterinarian who in turn will contact all state agencies and professional societies and organizations that could potentially be involved in disaster animal care and control (all members of the Disaster Animal Care and Control Committee [DACC]) to inform them about the suspect monkeypox case, plans for and progress in the investigation.
2. Contact the Director of the Wildlife Division in VDGIG to inform him/her about the suspect monkeypox case, plans for and progress in the investigation.
3. Working with the DHD and VDACS, VDGIF and other members of DACC, ensure that people handling (pet owner, veterinarian or staff,

emergency responders from state agencies) the animal with suspected monkeypox immediately implement and follow infection control measures as outlined in section IV. and VII.

4. Provide information to all personnel working with potentially infected animals about monkeypox, risk of transmission, and smallpox vaccination recommendations.
5. Arrange for appropriate veterinary examination, diagnostic testing, euthanasia, and necropsy if indicated. Depending on the feasibility, this may be done by a VDACS veterinarian, other state or federal veterinarian, or a contract veterinarian at the site where the animal resides or at another facility approved by VDH.
6. Ensure that the DHD, VDACS, and VDGIF consult with DCLS to verify types and methods of specimen collection and diagnostic testing for monkeypox.
7. Ensure that DHD, VDACS, and VDGIF collect specimens per DCLS protocol.
8. Once specimens are collected, ensure a courier (arranged through DCLS and/or the DHD) transports the specimens to DCLS and that all appropriate forms are as complete as possible and accompany the specimens.
9. Ensure that the DHD, VDACS, and VDGIF personnel obtain detailed information about the animal's exposure history (e.g., contact with sick animals, contact with sick people, pet store, animal swap meet, etc. [Note: Animals that have had contact with infected people are considered exposed to monkeypox]).
10. Depending on the animal species involved and the location of the animal, coordinate with the appropriate state (VDGIF and/or VDACS) and/or federal agencies (USDA, FDA, CDC, and/or US Fisheries and Wildlife) to initiate a trace back investigation to determine the animal's place of origin.
11. Ensure that the LHD or DHD informs pet owners about quarantine directives and that they are following them.
12. If the animal has confirmed monkeypox, arrange to have the animal humanely euthanized to prevent further spread of disease (Refer to section **VII. Guidelines and quarantine for animals exposed to monkeypox**). Note: if the animal in question does not have confirmed monkeypox but has signs of illness compatible with monkeypox and other animals in the group have confirmed monkeypox, the animal should be considered a case and humanely euthanized as for confirmed cases.
13. If an animal is euthanized, make arrangements to have the animal carcass picked up from the location where the animal was euthanized, transported safely, and disposed of as recommended by the CDC and approved by the Virginia Department of Environmental Quality (DEQ).



14. Ensure that any facility incinerating carcasses is aware of infection control precautions needed for potentially infectious carcasses.
15. Work with DEQ to identify disposal sites (landfills and/or incinerators) for euthanized animals and determine their capacities. Different disposal site options should be available for different situations (i.e., animal size, number of carcasses, etc.).
16. Contact VDGIF and the Wildlife Center to alert them to increase surveillance for monkeypox in the wild animal population (especially among squirrels and other small mammals).
17. Arrange for DHD and pet store organizations to inform pet store owners about the possibility of monkeypox and to alert them to increase surveillance for monkeypox among the animals in their pet stores (especially small mammals).
18. Inform the general population about the possible monkeypox outbreak and provide guidelines about what to do if a pet owner suspects that his/her animal might have monkeypox. Also, provide information about signs and symptoms of monkeypox in humans and what to do if a person develops any signs or symptoms compatible with monkeypox. (This could be delegated to the appropriate public relations people after providing necessary information.)

## **VI. Management of animals exposed to monkeypox**

In certain circumstances, the State Commissioner of Health may invoke control measures that include quarantine and isolation of humans and/or certain animals as described in Article 3.02 of Title 32.1 of the Code of Virginia regarding *Quarantine and Isolation of Persons with Communicable Diseases of Public Health Threat*. Under any circumstances, an animal (including pets and wild animals) that could have been exposed to another animal or human suspected of having monkeypox or an animal that has a history of possible exposure with signs or symptoms of monkeypox, should be subject to the following guidelines.

- A. Separate (quarantine/isolate) the animal from people and other animals immediately. Place the animal (caged if appropriate) in a room with a closed door and keep it away from all other animals for 6 weeks from the date of exposure or purchase.
- B. Ensure that the animal's environment is comfortable with adequate lighting and air, and that the basic needs for food, water, cleaning and the removal of waste are met.
- C. Identify only one person to feed the animal, give it water, and clean its waste.
- D. Limit time spent with the animal to decrease the likelihood of transmitting infection.
- E. Anyone in contact with or handling the animal with suspected monkeypox should follow the Infection Control guidelines as outlined in section **VII. Infection control**.

- F. Inform the DHD or VDH promptly and follow further instructions for infection control and quarantine.
- G. Most animals that have had contact with another animal known to have monkeypox must be placed under quarantine for 6 weeks from the date they were last exposed.
- H. Do not release the animal into the wild.
- I. Do not leave the animal at a shelter/pound.
- J. Watch for signs of monkeypox illness in the quarantined animal (see animal monkeypox case definition).
- K. If the animal appears ill, call the DHD or VDH immediately and follow instructions.
- L. People who are immunosuppressed (e.g., HIV, cancer, transplant recipients, undergoing chemotherapy) or pregnant should avoid any contact with quarantined animals.
- M. If instructed to take the animal to the veterinarian, call the veterinarian first so the veterinarian can institute appropriate infection control measures in the office.
- N. If the animal dies or is euthanized, contact the DHD or VDH for instructions about how to properly dispose of the body. Do not throw the animal's body away in household trash or at a dump or landfill. Do not bury the animal's body in a residential yard.
- O. If unable to care for or keep the animal exposed to monkeypox, contact VDH. It may be recommended that the animal be humanely euthanized.
- P. Animals that have contact with humans infected with monkeypox are considered exposed to monkeypox and must be quarantined. It is unknown whether people with monkeypox can spread the disease to animals.
- Q. People with monkeypox should limit their contact with mammalian pets, including cats, dogs, and pocket pets.
- R. Pets should not be allowed to share an ill owner's bed and should not be allowed to have contact with clothing and other materials that have come into contact with an infected person's skin lesions.
- S. Smallpox vaccination is not recommended for pets

## **VII. Infection control in animals**

In addition to the guidelines listed under **VI. Management of animals exposed to monkeypox**, the infection control measures below should also be implemented.

- A. After any contact with the animal possibly exposed to monkeypox, wash hands with soap and water.
- B. Protective clothing is not needed when handling quarantined animals that have no symptoms.
- C. If the animal appears sick, it should be cared for by trained staff (e.g., a veterinarian, veterinary technician, or a selected wildlife rehabilitator) knowledgeable about proper infection control precautions.
- D. If instructed by the DHD or VDH to transport an animal that appears sick after a potential exposure to monkeypox to a veterinarian's office, follow the

instructions listed below as well as any other instructions from the State Public Health Veterinarian and/or VDH.

1. Contact the veterinarian's office about the transport so they may take appropriate infection control precautions.
  2. Wear gloves and protective clothing (e.g., heavy rubber gloves, long pants, and long sleeves) to avoid getting scratched, or coming in contact with any monkeypox lesions and/or the animal's body fluids.
  3. Place the animal in a cage or box for transport.
  4. Limit the number of people involved in the transport.
- E. If the veterinarian thinks the animal has monkeypox or if the animal is confirmed to have monkeypox, clean and disinfect (see H. below) the area of the vehicle where the animal was kept during transport.
- F. Wash and dry clothing and other washable materials used to handle the animal with suspected monkeypox.
- G. Wash hands with soap and water after cleaning the areas where the animal with suspected monkeypox was kept during transport.
- H. After the sick animal has been removed from a home or place of business, follow the instructions below as well as any other instructions from the State Public Health Veterinarian, State Veterinarian, and/or health department.
1. First, clean all surfaces with standard household detergents.
  2. After step A., clean with a disinfectant such as a solution of ¼ cup bleach to 1 gallon of water.
  3. Washable toys, cages, food containers, and other objects may be cleaned and disinfected by hand or in a dishwasher.
  4. Animal bedding, pillows, or other washable items may be washed in a household washing machine or thrown away after disinfection.
  5. Materials (such as wood chips) and other objects that must be discarded should be thoroughly soaked in disinfectant (e.g., bleach solution), placed in a plastic bag, and then put in a covered trash can for disposal with other household waste.
- I. People exposed to an animal with suspected monkeypox need to be watchful for signs of human illness that could be monkeypox. If a fever or other signs of illness develop (see human monkeypox case definition), a healthcare provider and the local or state health department should be contacted immediately.

## **VIII. Guidelines for quarantine and euthanasia of animals exposed to monkeypox**

The State Commissioner of Health may invoke control measures that include quarantine and isolation of humans and/or certain animals as described in Article 3.02 of Title 32.1 of the Code of Virginia regarding *Quarantine and Isolation of Persons with Communicable Diseases of Public Health Threat*. VDACS and VDGIF will implement quarantine and isolation measures for animals under their jurisdiction (such as

agricultural animals and game species). The following guidelines attempt to balance the prudent use of quarantine and euthanasia of exposed animals with the goal of preventing additional infections among humans and other animals, as well as preventing monkeypox from becoming established in a new wild animal reservoir.

**“Infected premises”** are defined as commercial or residential premises that housed animals meeting the suspect, probable, or confirmed case definition for monkeypox.

#### **A. Recommendations for premises that received prairie dogs or other mammals acquired from infected premises**

Commercial and residential premises that have prairie dogs or other mammals acquired from infected premises should be placed under quarantine (see section **VI. Management of animals exposed to monkeypox**) until the following conditions are met:

1. All animals infected with monkeypox have been euthanized by a veterinarian, trained animal welfare employee, or trained animal control officer. It is preferable that euthanization occurs on site and is conducted by a VDACS veterinarian. Any person conducting euthanization should follow infection control precautions as described in section VII.
2. All carcasses are transported to disposal sites.
3. All other mammals remaining on the premises have completed a six-week quarantine period following the last date of occupation by the aforementioned infected animals.

#### **B. Recommendations for other infected premises - animals**

Infected premises should be placed under quarantine until the following conditions are met:

1. All animals meeting the suspect, probable, or confirmed case definition for monkeypox have been euthanized.
2. All infected animals have been euthanized and their carcasses transported to disposal sites.
3. Other mammals remaining on the premises have completed a 6-week quarantine following the last date of occupation by the aforementioned infected animals.
4. Owners of commercial establishments may choose to have the 6-week quarantine lifted immediately if all mammals on an infected premise are euthanized and the premise is thoroughly cleaned and disinfected prior to restocking.

#### **C. Euthanasia and disposal of animals**

Infected animals should be humanely euthanized. [See American Veterinarian Medical Association (AVMA) guidelines on humane euthanasia for more

information.] Carcasses should not be disposed of by burial in a landfill or backyard setting. CDC recommends incineration of carcasses. Animals associated with a human case should be tested for monkeypox. Necropsies should not be performed on animals with suspected monkeypox. Rather, whole carcasses should be double bagged and frozen.

#### **D. Recommendations for follow-up of previously quarantined facilities - animals**

Close surveillance for morbidity and mortality among animals on the premises is required during the 6-week quarantine. Depending on the situation, surveillance would potentially be conducted by veterinarians from VDACS, VDGIF, federal agencies, or volunteer private veterinarians. Clinical and/or laboratory evidence of monkeypox occurring during the quarantine period results in automatic extension of quarantine. Following the end of the 6-week quarantine or depopulation, cleaning, and disinfection of the premises, trade of animals not covered by the Restrictions on African Rodents and Prairie Dogs Interim Final Rule may resume at commercial facilities. The owners should keep records on all sales and transactions. Close state and federal surveillance for morbidity and mortality among animals on the premises is encouraged for at least 6 weeks after the quarantine is lifted and trade has resumed.

### **IX. Role of Public Health Laboratory**

Laboratory testing for monkeypox virus will be conducted at Virginia's state public health laboratory, DCLS, and/or the CDC. All human and animal specimens should be sent directly to DCLS, unless otherwise directed, which will arrange for and coordinate any testing that will be performed at the CDC. DCLS will work with VDH state and local offices, VDACS, VDGIF, private veterinarians, the Wildlife Center, and any other involved agencies or personnel to ensure proper collection, transport, and testing of specimens. DCLS will provide information about all paperwork (including any necessary collection forms, consent forms, and labels) that need to accompany each specimen. Results of human and animal laboratory testing at DCLS and/or CDC will be reported by DCLS to the VDH State Epidemiologist or the State Public Health Veterinarian who will immediately notify the State Veterinarian, other involved state agencies, and DHD staff. DHD staff will then notify the animal and/or human health care provider, as well as pet owners whose animals were tested.

A courier service provides transport of specimens from all 35 health districts to DCLS. DCLS will coordinate all courier services. The courier service is routinely available Monday through Thursday. Specimens should not be sent on Fridays unless special arrangements have been made with DCLS. For urgent cases, it is possible for DCLS to arrange special courier services to pick up specimens and deliver them to DCLS. The courier service will also transport animal specimens from the collection site to DCLS. Further guidance about specimen collection, collection forms, biosafety guidelines etc. will be posted on the VDH website as needed.

## **X. Surge capacity and mass care**

DHDs should request VDH reinforcement from the Deputy Commissioner, Emergency Preparedness and Response (DCEPR) to increase investigation and surveillance capacity for human monkeypox cases. Personnel have been identified, department-wide, who are capable to assist. DCEPR will request reinforcement through the appropriate Deputy Commissioner. VDH will work with VDACS and VDGIF to address increasing personnel capacity if needed during a monkeypox outbreak.

District Health Directors should be able to implement surge capacity requirements in the event of a monkeypox outbreak. Their responsibilities will include:

- A. Contacting hospitals within their jurisdiction to collaborate with them in planning provisions for mass care of community members. Plans should include arrangements for out-of-hospital triage, transportation and housing of patients, increased staffing, communication with the general population and medical care providers, equipment requirements (computers, phones, etc.), food/potable water for staff, proper waste disposal, and security.
- B. Identifying potential monkeypox treatment facilities to accommodate patients using worst case planning scenarios and JCAHO standards as a general guide.

Regional EP & R team surge-related responsibilities will include

- A. Assisting and reinforcing the District Health Director as required.
- B. Coordinating intra-regional surge efforts among districts as required.
- C. Coordinating inter-jurisdictional support.
- D. Facilitating coordination and cooperation with out-of-state jurisdictions.
- E. Identifying and reporting to VDH EOC regional hospital bed availability and overflow capacity.
- F. Coordinating regional operations with VDEM counterparts.
- G. With the District Health Directors, requesting the Strategic National Stockpile (SNS) as needed.
- H. Coordinating quarantine enforcement with local law enforcement agencies as required.

## **XI. Communication**

### **A. Objective**

The primary communication objective of VDH during a monkeypox outbreak will be to provide timely, accurate, and consistent information about the monkeypox outbreak and investigation to healthcare providers in all settings involved (private practices, hospitals, clinics, etc.),

veterinarians, animal care personnel, the media, pet owners, and the general public.

### **B. Primary message**

The VDH Public Relations Manager, in conjunction with the State Epidemiologist, the Office of Epidemiology Public Relations Coordinator, and the State Public Health Veterinarian, and the appropriate individuals from VDACS and VDGIF, including Public Information Officers (PIOs), will develop and arrange for the dissemination of information about monkeypox. This information will include a brief description of the outbreak and what the VDH, DHDs, and the State Public Health Veterinarian, and other state agencies are doing in response, the risk to the individuals and their pets, measures people can take to decrease their risk of contracting monkeypox and/or spreading monkeypox to others, measures people can take to decrease their pet's risk of contracting and/or spreading monkeypox, quarantine/isolation recommendations for humans and animals, treatment and supportive care, where to go if a person or an animal is suspected of having monkeypox, and who to contact with other questions. The CDC monkeypox webpage will be very useful in developing information for dissemination.

### **C. Protocols for information dissemination**

1. A monkeypox outbreak, as well as a single suspect case, will generate public concern and media attention. The VDH Public Relations Manager will oversee all public and media relations for the state and coordinate with the VDACS PIO. The Office of Epidemiology Public Relations Coordinator will lead the development and release of monkeypox-related materials and information to the public or media under the direction of the State Epidemiologist and the State Public Health Veterinarian. Regional PIOs or District Health Directors will assist the Office of Epidemiology Public Relations Coordinator with the release of information. The State Epidemiologist and State Public Health Veterinarian with help from other agencies, including Virginia Veterinary Medical Association (VVMA), Virginia Animal Control Association (VACA), Virginia Federation of Humane Societies (VFHS), USDA, and Area Veterinarian in Charge (AVIC), will ensure all necessary information is disseminated to health care providers. VDH will work with the State Veterinarian, USDA, APHIS, and the AVIC to ensure all necessary information is disseminated to veterinarians and other animal care providers.
2. Details on protocols and procedures for managing media relations and plans for responding to a communication crisis can be found on the

VDH internal Newsroom web site under the “VDH Communication Plan” – updated April 2004.

3. In the event of a state emergency declaration by the Governor, the Department of Emergency Management’s Office of Public Affairs becomes the lead state agency for the organization and management of the dissemination of information.
4. On the state level, the State Health Commissioner, DCEPR, Deputy Commissioner for Public Health, State Epidemiologist, and the State Public Health Veterinarian will serve as the principal spokespersons about monkeypox.
5. On the local level, the District Health Director or his/her designee will serve as the spokesperson. The Office of Epidemiology Public Relations Coordinator and regional PIOs also will provide information to the media if needed, but in most cases will arrange interviews with expert medical spokespersons. Close collaboration with local hospitals, healthcare providers, veterinarians and animal care and control providers will be necessary to coordinate public and media messages.

#### **D. Methods and vehicles for disseminating information:**

1. A public information committee comprised of the VDH Public Relations Manager, Office of Epidemiology Public Relations Coordinator, State Epidemiologist, State Public Health Veterinarian, regional PIOs, one field representative from each region, the State Veterinarian, the VDACS PIO, and a representative from VDGIF will review talking points, FAQs, and fact sheets (excluding press releases from the central office) before distribution to the public. In an emergency, the committee may be reduced in size to expedite the release of information.
2. VDH will disseminate information to all audiences through press conferences, press releases, media interviews, the agency’s website, regional PIOs, local health department contacts, the Health Alert Network (HAN), professional medical organizations, and other resources.
3. The VDH website will be updated at least once daily, Monday through Friday no later than 10 a.m. to provide information about the monkeypox investigation, materials about monkeypox, and links to CDC websites about monkeypox. The site indicates the date upon which it was last updated.



4. VDH will work with the Northern Virginia Health Education Center (NVHEC) to translate and disseminate information about monkeypox to non-English speaking populations. VDH currently has a contract for rapid information translation services through NVHEC.
5. If a monkeypox outbreak triggers a declaration of a state of emergency by the Governor, then the Department of Emergency Management Public Health Inquiry Center (PIC) may be opened to receive calls directly from Virginians. A PIC action plan has been established and state employees have been trained in the operation of the PIC.
6. VDH will disseminate and coordinate information with local public health officials through email, conference calls, and video conference meetings.
7. VDH will disseminate and coordinate information with hospitals, physicians and other health care providers, veterinary clinics, veterinarians and other animal care and control organizations through the District Health Directors, the Office of Epidemiology, the State Public Health Veterinarian, the Virginia Hospital and Healthcare Association, VVMA, and the HAN, VACA, VFHS, rehabilitators, VDACS, and VDGIF.

**E. Monitoring emerging communication issues:**

1. VDH public information staff will pay close attention to media reports on monkeypox through its media monitoring subscription (capitolwire.com) to gauge reaction to the situation and to look for possible reports of misinformation. News articles on monkeypox will be collected and sent to the field via e-mail as needed. If a state of emergency is declared, daily updates, including news articles, will be coordinated through the Joint Information Center.
2. VDH will immediately respond to misinformation or questions regarding particular issues through press releases, phone calls or e-mails directly to reporters or the organization requesting clarification, or by posting updated information on the VDH website.
3. VDH will request the local Emergency Planners set up a system for tracking the number of incoming calls from the public regarding monkeypox. Trends in misinformation or growing concerns can then be communicated back to the regional public relations staff and addressed in further communications with the public.

**F. Release of information:**

1. VDH will limit the release of any potentially identifying information about individuals under investigation, animal owner location, and any business involved. The Office of Epidemiology will release the following information regarding suspect or probable human monkeypox cases: date the case was reported to VDH, health district in which the case resides, gender of individual, result of laboratory testing, and status of case (i.e., hospitalized, released, at home, etc.).
2. In addition, VDH will address whether the individual has a history of exposure to an animal with or suspected of being infected with monkeypox, is a close contact of a monkeypox patient, is a healthcare worker who treated a monkeypox patient, or is a veterinarian or animal care or control worker who treated an animal with or suspected of being infected with monkeypox.
3. Additional information about suspect or probable human cases of monkeypox may be released in the event that such information is necessary for the protection of public health.

## **XII. Education and Training**

It is essential that public health, medical, veterinary, and animal care and control personnel be educated on the history, epidemiology, and current CDC recommendations about monkeypox. Websites will be used as a central component for managing the information requests from the public. Websites should be used to organize and quickly provide information to a range of audiences. Information will be in the form of updates, fact sheets, frequently asked questions documents, etc. Human and animal healthcare provider resources, including patient, pet owner, and general public education materials, will be available.

### **A. Educational materials**

A portfolio of education materials and sources will be available on various aspects of monkeypox, including: clinical and laboratory characteristics of monkeypox, infection control, management of suspect human and animal cases of monkeypox, vaccine recommendations, and animal quarantine recommendations. These materials will be accessed by a link from the VDH website to the CDC website or directly to the CDC monkeypox website.

Using information available from the CDC and other resources, VDH and the State Veterinarian's office will develop educational packets which will be used to educate the public, personnel at the local health departments, and personnel in animal care settings. These packets may include:

1. PowerPoint presentations
  - a. monkeypox overview
  - b. monkeypox epidemiology in humans and animals

- c. description of monkeypox infection in humans
  - d. monkeypox treatment and infection control guidelines for physicians and other healthcare personnel
  - e. description of monkeypox infection in animals
  - f. monkeypox treatment and infection control guidelines for veterinarians and other animal care personnel
2. Handouts and/or brochures
    - a. guidance for physicians on diagnosis and treatment of monkeypox in humans
    - b. guidance for veterinarians on diagnosis and treatment of monkeypox in animals
    - c. monkeypox fact sheet for physicians and veterinarians
    - d. monkeypox fact sheet for the general public
    - e. guidance for laboratory specimens collection and handling for human specimens and animal specimens
    - f. recommended infection control practices including the use of personal protective equipment and procedures
    - g. management of healthcare worker and veterinarian worker exposures
  3. Listings of electronic resources (websites, CD-ROMs) with information about monkeypox

## **B. Target audiences**

Education packets and any other relevant material about monkeypox should be made available to the following healthcare personnel. In addition, these people should distribute education packets to any others who would benefit.

- District Health Directors
- District Epidemiologists
- Regional Epidemiologists
- District Emergency Planners
- Regional Emergency Planners
- Local Public Information Officers
- Communicable Disease Nurses
- Infection Control Practitioners in hospitals
- Physicians in private practice
- Veterinarians in private practice
- ACOs
- Rehabilitators
- Animal Welfare Personnel